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ABSTRACT

This report provides a synthesis of the principal trends concerning access to higher education in Europe. The paper treats five themes, the first of which, higher education structures, notes that the dominant trend is towards greater institutional diversity. A discussion of enrollment finds that France, Germany and Sweden have enrollment rates approaching 50 percent. In Spain one in three goes to university and in the United Kingdom only one in five goes on to higher education. In Central and Eastern Europe, enrollment figures are as low as 20 and 15 percent. A section on the European dimension of higher education notes that, though the number of students studying in another member country has been relatively low, it is likely that student mobility in the European countries has risen and will continue to rise with the advent of several special programs and recent political changes. A final section on future prospects argues that the main international organizations concerned with higher education in Europe have all favored expansion in the number of students and in enrollment rates. These calls have been received with circumspection by national authorities and higher education establishments due to their more immediate preoccupations. (JB)

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JOINT CONFERENCE ON ACCESS TO HIGHER EDUCATION IN EUROPE

Parma, 13 - 16 October 1992

Access to higher education in Europe: problems and perspectives

Report prepared by M. Jean-Pierre JALLADE

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SUMMARY

The aim of the present report is to present a synthesis of the principal trends concerning access to higher education in Europe. It has been drafted in order to provide a basis for the European Conference on "Access to Higher Education in Europe", which will be held in Parma from 13 - 16 October. on the initiative of the Council of Europe. The conference is co-sponsored by the Commission of the European Communities.

The present report focuses on the five following themes:

- *higher education structures,*
- *access to higher education,*
- *enrolment in higher education,*
- *the European dimension of higher education and*
- *future prospects.*

I. HIGHER EDUCATION STRUCTURES

It is clear from a comparative study of higher education structures in Europe that there are a number of organisational models, whose characteristics will be analysed in detail below. One comment needs to be made at the outset: in some countries, the institutional diversification which was observed occurred outside the predominant university model. In these cases one can therefore speak of an ***external diversification****. Higher education in these countries comprises two sectors - the university sector and the non-university sector - each with its specific characteristics. They are binary systems of higher education. In other countries, institutional diversification can be said to be "Internal" because it has developed actually within the university: it can be termed an integrated university model. In other countries, although this is rare, higher education structures have hardly changed in 30 years. Lastly, while it is impossible to speak of a specific higher education model in Central and Eastern Europe, a number of specific features which are peculiar to these countries must be mentioned.*

- *The number of mono-disciplinary universities, i.e. those with a single faculty, is exceptionally high.*

- *These specialised establishments frequently come under ministries other than the Ministry of Education, for administrative and financial purposes.*

- *Research is concentrated in academies which are separate from universities and have no teaching activities.*

Generally speaking, the dominant trend is towards greater institutional diversity. Within the university sector itself, the wish to create "European centres of excellence", which is clearly present in several Western European countries, means a new distinction has to be made between "advanced" universities with good research capabilities and linked to European networks, and those which focus more on teaching. In addition to the university and non-university sectors, the private sector which is still little known is developing in the direction of important new subjects such as Computer Science and Management. In general, European higher education systems are geared towards complex and diverse structures which attempt to respond to the whole variety of their set objectives and the increasingly heterogeneous nature of their student clientèle.

II. ACCESS TO HIGHER EDUCATION

Policies of access to higher education are an essential instrument in regulating student flows within educational systems. Not only do admission and guidance procedures differ noticeably between European countries but these procedures apply to a pool of qualified school leavers which varies enormously in size and composition from country to country. The result is a very contrasted landscape which can be broadly divided into five main approaches:

- *In binary higher education systems, admission procedures in the university sector are in general (with some exceptions!) more stringent than in the non-university sector. Enrolment is closely linked to the - more or less compulsory - guidance of students into one or other sector. This also applies to student guidance in the long and short courses of systems with an integrated university structure, albeit to a much lesser degree.*

- *The secondary school leaving qualification is necessary for access to higher education, but less and less is it sufficient to provide the candidate with a free choice of establishment or subject. In most countries of Western Europe, this free choice is restricted -often by higher education establishments themselves - by means of additional requirements with a more or less compulsory guidance objective: entrance examinations, interviews, subjects studied, school records.*

- *When demand for places in a given place or subject exceeds capacity, secondary school records such as marks, subjects taken, options, end of secondary school examination results, become increasingly important in the admission and guidance process.*

- *The importance given to grades in the admission and guidance process is the inevitable corollary of the institutional diversification process described above. Not only is higher education in Western Europe diversifying into sectors and sub-sectors, but differences -and explicit or implicit hierarchies - based on academic prestige - are appearing between establishments. Clearly, in systems which are so diverse, there is no room for admission procedures based solely on the possession of the secondary education qualification.*

- *It is likely that the current highly selective admission procedures in Central and Eastern Europe will gradually become more "liberal" and more diverse, on the lines of those in Western Europe. But this change will take time because of the presence of all sorts of constraints, such as the lack of physical capacity and wider-diversification of higher education in these countries.*

The pool of qualified school leavers varies greatly from country to country:

- *In some Western European countries, as many as 45% of pupils obtained their school-leaving qualification in 1990 and thereby gained access to some form of higher education. However, this percentage is far from being achieved everywhere. In some countries, only one in three, or even one in four pupils obtain the necessary credentials. In Central and Eastern Europe, the figure is below 20% (one in five!).*

Admission figures give an indication of the "selectivity" of admission procedures at the point of entry to higher education and its various sectors. They can thus be used as an instrument for the management and direction of student flows. In Southern Europe (Italy, Spain, France) policies of access to higher education are extremely liberal, even in cases like France where highly selective practices in a part of the non-university sector results in mandatory educational guidance for students. In Northern Europe, particularly in Sweden, admission policies are slightly more restrictive and students are given notably less choice. Free choice is restricted to students with the best grades (the great majority, however). Lastly, in Central and Eastern Europe, access to higher education is very restrictive and gives students very little freedom of choice.

III. ENROLMENT IN HIGHER EDUCATION

Three countries (France, Germany and Sweden) have enrolment rates approaching 50%, with one in two pupils going on to higher education. With a rate of one in three, Spain is well to the fore, due to recent developments. In the United Kingdom, only one in five goes into full-time higher education, although this figure slightly under-estimates the real situation, as the number of part-time students is high, it indicates accurately the small size of the pool of qualified school leavers (minimum of two A levels). In Central and Eastern Europe, enrolment figures are low: less than 20% and, in some cases, less than 15%.

IV. THE EUROPEAN DIMENSION OF HIGHER EDUCATION

In the EEC, the total number of "mobile" EEC students, ie those studying in another member country, was approximately 90 - 92,000 in 1990. The number of students "exported" or "imported" by the larger EEC countries remains very low compared with the number of nationals: between 1% and 2% of the total. It is extremely likely that student mobility in the EEC countries has risen considerably over the last two years, which corresponds to the increasing impact of the ERASMUS programme and the start of the LINGUA programme. In the absence of official statistics, which are not yet available, it would be risky to quote a figure, but it may well be that, in 1992, close on 200,000 students could be considered "mobile" (3% of the EEC student population). Student mobility between the two Europes, Western and Central Eastern, has always been low and imbalanced at the expense of the latter. In 1988-89, fewer than 7,000 West European students were studying in Central and Eastern Europe. In the other direction, student flows were somewhat greater but not really substantial, since there were no more than 11,000 Central and East European students attending higher education establishments in Western Europe.

The new situation created by the political events of 1989-90 will no doubt alter the nature of the problem and a massive increase in student mobility from Central and Eastern Europe and the CIS in the direction of Western Europe can be expected. Multilateral programmes such as TEMPUS are already contributing to this trend in certain subjects.

V. FUTURE PROSPECTS

The main international organisations concerned with the problems of higher education in Europe in one capacity or another have all come out in favour of expansion in the number of students and higher enrolment rates. Such calls from international organisations are sometimes received with a certain circumspection by national authorities and higher education establishments, due to their more immediate financial and institutional preoccupations. There is a need in Central and Eastern Europe, not only for encouragement to expand but also for financial and human resources to make it possible.

ACCESS TO HIGHER EDUCATION IN EUROPE

PREFACE

The aim of the present report is to present a synthesis of the principal trends concerning access to higher education in Europe. It has been drafted in order to provide a basis for the European Conference on "Access to Higher Education in Europe", which will be held in Parma from 13 to 16 October on the initiative of the Council of Europe. The conference is being co-sponsored by the Commission of the European Communities.

The report does not attempt to provide an exhaustive panorama of the different national policies on access to higher education of the Council of Europe member countries, but rather to indicate the main trends from a comparative viewpoint. Its aim is to contribute to a mutual knowledge of higher education systems and help national authorities to "situate" their access to higher education policies in relation to the situation of their neighbours in a perspective of growing interdependence between the different higher education systems.

The problem of access to and participation in higher education is one of the four main areas of action identified by the Commission of the European Communities in its "Memorandum on Higher Education in the European Community", published in November 1991 (1). This memorandum comes out explicitly in favour of an greater participation in higher education in the Member States of the EC. The present report, which places itself in a pan-European perspective, constitutes an attempt to provide an overview of the existing situation, to examine the principal problems and identify future developments in the different European countries, including those of EFTA and those of Central and Eastern Europe.

The present report focuses on the following five themes:

- Higher education structures
- Access to higher education
- Enrolment in higher education
- The European dimension of higher education
- Future prospects.

1. HIGHER EDUCATION STRUCTURES

During the last 30 years, the development of higher education - very rapid in Western Europe but more moderate in Central and Eastern Europe - has gone hand in hand with a growing diversification of its structures. Alongside traditional universities characterised by an "academic" form of education focused on a single discipline, "short", more vocational courses have been developing, geared more closely to the requirements of the employment market. New diplomas have also been created, contributing to the diversification of graduates as "products" of higher education. Links between higher education and research have been modified or reinforced and partnerships with industry encouraged. Lastly, the private sector of higher education, not yet fully known, is developing in every area where the public sector is unable for one reason or another to satisfy the expectations of users, be they students or employers.

At present, European higher education systems are characterised by immense institutional diversity which is doubtless the consequence of the increasing multiplicity of purposes they have to achieve. This trend is worldwide, but in Europe, it is vital to bear in mind the need for a European dimension in education as must the need for the different educational systems gradually to be brought closer together in order to facilitate mobility in higher education.

It is clear from a comparative study of the different structures of higher education in Europe that there are a number of organisational models, the characteristics of which are analysed in detail below (2). One comment needs to be made at the outset: in some countries, the institutional diversification which was observed occurred outside the predominant university model. In these cases one can therefore speak of an **external diversification**. Higher education in these countries comprises two sectors - the university sector and the non-university sector - each with its specific characteristics. They are binary systems of higher education. In other countries, institutional diversification can be said to be **"internal"** because it has developed actually within the university: it can be termed an integrated university model. In other countries, although this is rare, higher education structures have hardly changed in 30 years. Lastly, while it is impossible to speak of a specific higher education model in Central and Eastern Europe, a number of specific features which are peculiar to these countries must be mentioned.

A. The binary higher education model

The binary model is the most widespread in Europe. It is predominant in some 12 European countries and different forms can be found in two others. It must be stressed that this model is the result of the gradual development of a non-university sector alongside the traditional university system. The origins of this type of pattern and the circumstances which accompanied its development in the United Kingdom and Germany can be seen in many other countries.

1. Well-established binary systems: Germany and the United Kingdom

Origins

Higher education institutions in both these countries are characterised by the division between Universities vs Fachhochschulen in the first and Universities vs Polytechnics and Colleges in the second. It is true that neither the Fachhochschulen nor Polytechnics are the only institutions in the non-university sector. Beside the Fachhochschulen, a "third sector" should be added, consisting of the Berufsakademien and the Wirtschaftakademien which exist only in two Länder, Bade-Würtemberg and Schleswig-Holstein, and which are not really representative of the whole of German higher education. As is the case everywhere, developments in the private sector have not been clearly charted. In the United Kingdom, Polytechnics and Colleges represent what is commonly known as the "public sector", Universities being private organisations established by Royal Charter or by a parliamentary decision but financed by the Government. The "third sector", which is privately funded, has been growing rapidly over the last few years.

In both Germany and the United Kingdom, higher education is therefore organised according to a binary model in which the non-university sector has developed sufficiently to counterbalance the traditional universities. The circumstances which have contributed to the appearance and development of the non-university sector are rather similar in both countries. The arguments used in the 60s to support these major reforms were both economic - to meet the economy's requirements for a highly trained workforce - and socio-political: the need to open up a university system which was considered too elitist and to make higher education more accessible. In both countries, discussions were marked by the same scepticism towards universities, which were considered incapable of fulfilling the ambitious objectives assigned to higher education. Hence the need to create new institutions which would differ from universities in their objectives and characteristics.

The reform movement was strong enough for a "binary" system to establish itself, with the different sectors remaining relatively separate from each other. As early as 1965, the United Kingdom authorities were very clearly rejecting the idea of a hierarchy whereby institutions in the non-university sector would offer basic degree courses only. At the same time in Germany, arguments in favour of a separate development policy for the two sectors focused on incompatibility between universities, which were primarily interested in fundamental research and prolonged studies, and the need for shorter and more vocationally oriented courses in non-university establishments.

Two other factors contributed powerfully to the establishment of "binary" systems. Firstly the financial factor, because student costs were supposedly lower in the non-university sector than in the university sector, for several reasons: few or no research activities, lower salaries for teachers and more active support from industry. In Germany, student costs were also lower because courses in the Fachhochschulen were much shorter than in universities. The second factor concerns the circumstances in which the first Fachhochschulen and Polytechnics were created. They did not arise ex nihilo, but were created during the same period (1969-1971) by amalgamating existing technical colleges specialising in Management and Engineering. These origins contributed extensively to establishing the vocational and practical orientation of these establishments, as distinct from universities, where teaching remained centred around the mastery of an academic discipline and oriented towards research.

The situation today

The emergence of the non-university sector has been greatly helped by the prevailing socio-economic climate of the last two decades. In the 70s and until the second oil crisis in 1978, the demand for graduates from short higher education courses by industry and the tertiary sector was sustained and employers welcomed these new courses, which were well adapted to the requirements of companies. Later, the crisis affecting national budgets and the resulting restrictions in the recruitment of researchers and lecturers weakened the value of university degrees more than that of other diplomas. This helped to give diplomas in the non-university sector a "secure" image in an increasingly selective employment market. Lastly, although governments were applying very strict budgetary policies in the early 80s, they were also aware of the fact that the non-university sector was a better alternative because per student costs were lower. They therefore encouraged the expansion of student numbers in this sector. In Germany the number of students in the Fachhochschulen rose by 85% between 1980 and 1990 compared with 44% in universities. In the United Kingdom, they rose by 55% and 20% respectively. The non-university sector has therefore continued to show robust development in spite of the economic crisis facing higher education.

2. Characteristics of the binary model

The origin of the binary model described above is almost analogous in other countries, for example Belgium, the Netherlands, Greece, Ireland and Portugal. There are of course local variations, but on the whole the trend is the same. Initially surrounded by scepticism in the 60s, the development of the non-university sector has nearly always been faster than that of the university sector.

In a higher education system dominated by university standards, values and methods, the central problem of the non-university sector is to acquire a profile which is distinct from that of universities and to establish its credibility on different bases, in order to gain the social prestige necessary to its development. The temptation to emulate universities without being able to match them had therefore to be resisted with determination, and this could only be achieved by reinforcing the specific features of non-university institutions. Twenty years after their creation, it is safe to say that the battle has been won and that they occupy an enviable and stable position in higher education.

The non-university sector has adopted different standards from those of universities in respect of the subjects taught, admission procedures, teaching methods, the profile of teaching staff, relations with the world of work, the economic value of diplomas, etc. Over the years, it has consolidated its position and become a credible alternative to traditional universities in both students' and employers' eyes.

On the whole, the non-university sector differs from the university sector on a number of different levels:

. The types of courses offered are much more limited, placing the accent on Engineering and Management Sciences for employment in the private sector and on teacher training and paramedical and social studies for employment in the public sector.

. Teaching is more directed in the non-university sector with more rigid timetables and less freedom for students: there is little or no research.

. Entrance requirements at the end of secondary school are less demanding than in universities: see section II below.

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. The official duration of studies is shorter in the university sector than in the non-university sector, but repeated years are fewer, and the drop-out rate is lower.

. Curricula have a more practical and more vocational orientation: work experience and training courses are seen as important.

. Teachers have different qualifications: a lower academic level but more experience of the world of work than university lecturers. Many teach on a part-time basis and have a job in industry.

. The economic value of diplomas in terms of pay is lower than that of university diplomas, but there are many career openings because the specialist subjects taught are in demand.

All these distinctive features have helped to fashion the image of the non-university sector which, over the years, has found a separate niche, distinct from the university sector. In some countries, particularly France and Denmark, structural diversification has led to a model which is more fragmented than the binary system. In a sense, the French higher education system can be said to have been binary before all the others, with universities on the one hand upholding the so-called "academic" or professional values in the traditional sense of the term (Law, Medicine) and the "Grandes Ecoles" on the other, responsible for "modern" or "expert" culture.

In addition to this dichotomy in French higher education structures, another has grown up within short technology courses. The creation of a network of Instituts Universitaires de Technologie" (IUTs), offering two-year post-secondary courses coincided with that of the Fachhochschulen and the Polytechnics; they function on the same principles. But their creation was accompanied by the very rapid development of two-year training courses in the lycées: the "Sections de Techniciens Supérieurs" (STS). The French higher education system is therefore made up of four sectors. In Denmark also, a third sector must be added to the existing binary system; it offers short vocational training courses in secondary education establishments.

B. Beyond the binary model: the integrated university model in Spain and Sweden

A number of countries with a higher education system traditionally organised on a binary basis have attempted to break out of the binary system by merging all higher education establishments into universities with a broader scope of activities. Their achievements have at times fallen short of expectations. In Germany, for example, hopes in the late 60s of an integrated university system (Gesamthochschule) were cut short. In Sweden and in Spain, recent reforms are therefore aimed at the absorption of the old binary structures, with preference going to more or less "integrated" higher education structures. In both countries, external diversification is being replaced by internal diversification of university structures.

In **Sweden**, higher education consisted in the past of universities and institutes specialising in technology and agriculture, on the one hand and, on the other, of colleges offering courses of short duration in specific vocational fields, mainly teacher training and the training of social workers. There was a definite difference of status between the two types of establishments, mainly based on the nature of the training provided, the presence or absence of research activities and the duration of courses. The university sector and assimilated institutes provided education of an "academic" nature supported by research activities, pure or applied, in three-year courses, often four years in the sciences. Short vocational diplomas did not include research and the maximum duration of courses was two years.

The effect of the 1977 reform was to change the structures of Swedish higher education considerably. The underlying principle of the reform is to promote an integrated and coordinated system, covering all higher education establishments, whatever their nature, in seven university districts corresponding to the country's main regions. Each of these districts is composed of one important university and one or several colleges. The group budget and administration is coordinated by a regional board.

Because it departs from the traditional binary system, the Swedish higher education system can be defined in terms of curricula leading to diplomas (full degree curricula) in five broad subject areas (seven in practice) established by the 1977 educational reform. The duration of these curricula varies considerably. Courses with a credit total inferior to 120, ie less than three years of study, are considered "short". These are particularly prevalent in the health professions - paramedical, of course - and teacher training for nursery and primary school teachers, but they are also numerous in Engineering and Management sciences. Courses of three years or more are called "long".

The key idea behind the reform, based on comprehensive higher education establishments offering a whole range of different courses, from the more "academic" to the more "vocational", differing widely in duration and quality, aimed at young people and adults, corresponds to a firmly established tradition in Swedish educational policy. The 1977 university reform was the logical consequence of the 1971 upper secondary education reform, in accordance with which general and technical educational curricula of different duration existed side by side in comprehensive secondary schools (Gymnasieskola). The social-democrat inspiration of the reform is evident, and is reflected in the deep mistrust felt by the authorities concerning the artificial prestige which can be created by university cliques which are too inward-looking and a certain amount of suspicion towards academic elitism in so far as it cements social inequalities.

In **Spain**, higher education structures used to be similar to those in France. In addition to and outside universities, there was a network of higher technical colleges (Escuelas Técnicas Superiores), similar to the French "Grandes Ecoles" which had developed since the end of the 18th century. The post-war period, in particular the late fifties, saw the beginning of a divergence in the structural evolution of the two systems. In Spain, the university system gained the upper hand by incorporating first of all the Escuelas Técnicas Superiores, then a number of colleges of "intermediate level" which offered training in three areas: management, teacher training and technical training. Not only were these colleges not part of the university system - the secondary education diploma was not required for admission, which was possible at the end of the first secondary school cycle. They were therefore not exactly higher education establishments, but as the training they provided was regarded more highly than secondary education, they were prime targets for integration into higher education. This was realised with the 1970 General Education Act (LGE) which incorporated the colleges into the university system. Today, apart from a few courses in the social sphere and certain very specialised fields (navigation, tourism), nearly all Spanish higher education is part of the university system.

As in Sweden, there are short and long duration curricula:

(i) **The long curricula last five years** in most subjects, six years for medicine and engineering. They are taught either in faculties which award the "Licenciatura", which corresponds to a master's degree, or in the Escuelas Técnicas Superiores which lead to diplomas in advanced engineering or architecture. These long curricula are divided by law into a first and second level. At the first level which takes three years and leads to the title of "Diplomado", teaching is of a more general nature. Students then specialise in the last two years. The first level courses can also be taken in university colleges which are often situated in the provincial capitals but which are nevertheless dependent on the universities both academically and administratively.

(ii) **The short curricula take three years** and are offered either in university faculties which award the title of "Diplomado", or in the Escuelas Técnicas Superiores, leading to a diploma in engineering or architecture (technical level). They are university curricula leading to national diplomas which are recognised throughout the Spanish territory.

In both Sweden and Spain, the evolution of the higher education structures clearly shows the predominance of the university model, which has been flexible and powerful enough to incorporate establishments not belonging to them by tradition. However, it must be said that the internal structures of universities vary greatly: with short courses presenting the same characteristics as those of the non-university sector in the binary model existing side by side with the traditional long courses.

C. Universities only: Italy and Austria

In some European countries, the development of higher education in the last 30 years has not involved any significant structural diversification. The traditional university remains dominant. The sequence and duration of studies and the examination system remain relatively monolithic. A case in point is Italy, which, unlike Sweden and Spain, has never experienced the binary system, although recent legislation (1990) is attempting to introduce short programmes of study which were hitherto non-existent. However, the vocational aim of these programmes is not evident as they tend to represent stages in traditional university courses rather than new programmes answering the clearly expressed needs of the labour market. The comparative opposition to change which typifies higher education structures in Italy can also be attributed to the considerable political problems caused by any attempt to reform higher education.

In Austria, the traditional university system is also dominant and the vocationally oriented non-university system has never managed to establish itself, despite the proximity of the German model. The usual explanation is that the country has excellent technical secondary schools which do away with the need for short post-secondary training courses. Furthermore, the influence exercised on the elite by the Humboldtian concept of the university, closely associating education and research, may also have helped to prevent the development of a higher education sector with short duration vocational courses, separate from the University. However, there is today a strong movement in favour of the creation of a non-university sector.

D. The situation in Central and Eastern Europe

In Central and Eastern Europe, higher education structures present characteristics analogous to those of Western European countries and also specific features which are common to those countries. The binary model is prevalent in Hungary, Croatia, Bulgaria and Romania, where a non-university sector coexists with a university sector. In Romania, the higher education system is divided into three parts: universities, which offer long courses (4 to 7 years), colleges (3 years) and post-secondary technical courses (2 years). While both university and non-university sectors may closely resemble those of Western Europe in their objectives, organisation and the structure of curricula, comparisons with the Western European practices can be misleading: in Central and Eastern Europe, the reality behind the labels of "University" or "Institute" is often very different from that in the West. Generally speaking, the content of university and non-university courses is definitely more "technical" and more "specialised" in the East. This is due to the fact that disciplines such as the Humanities, Social Sciences and Law are not given much weight and to the high degree of specialisation in the sequence of studies.

In Czechoslovakia - and to a large extent in Poland - there is no higher education system outside the long duration university courses. Efforts are being made to diversify university structures. In Poland, for example, three-year para-university courses in foreign languages were recently created. In Czechoslovakia, the May 1990 Higher Education Reform Act provides for the creation of short duration courses leading to a bachelor's degree in two or three years. However, it seems that this new diploma is often considered as a basic qualification that every student needs before being able to undertake prolonged long-term university studies, and not a vocational diploma geared to the employment market. One cannot therefore really speak of a structural diversification.

The institutional characteristics specific to Central and Eastern European countries can therefore be summed up as follows:

- The number of mono-disciplinary universities, ie universities with a single faculty, is exceptionally high. In Czechoslovakia, for example, in addition to the five multidisciplinary universities in the Western sense of the term, here are four technical universities and 27 specialised institutions, often called universities, such as the universities of Agriculture, of Medicine, of Veterinary Science, etc. The courses available in these establishments are more like high level but specialist vocational training than broader based university courses.

- The specialised institutions frequently come under ministries other than the ministry of education for administrative and financial purposes. As a result, there are considerable problems of communication between them. The coordination and channelling of the higher education system is problematic.

- Lastly, research is concentrated in academies which are separate from universities and have no teaching activities. As a result, the research element of higher education is often limited and the essential link between education and research is scarcely developed.

In addition to these three characteristics inherited from the previous regime, there is a fourth which is the result of the higher education reforms carried out under the new regime. Most of these reforms emphasise, among other things, the institutional and administrative autonomy of higher education establishments, as an understandable reaction against the over-centralisation of the previous regime. Autonomy is all very well, but if it becomes excessive, it may lead to the higher education system becoming fragmented and also slow down the pace of reforms. In the present period of transition, it seems that no satisfactory solution combining institutional autonomy and the steering power of central government has been found.

Another characteristic feature of Eastern European higher education systems is the emergence of private establishments functioning on a commercial basis. As a result of the unprecedented budgetary crisis facing the public higher education sector and perhaps also because of the rigidity of its structures - in particular the very strict numerus clausus at the point of entry to higher education in the public field, the private sector is developing here and there, sometimes with foreign aid, in very specific fields (Management, Computer Science, etc) where demand is not satisfied by the public sector. In Romania, for instance, there are 30 or so private universities are offering courses on a purely commercial basis in addition to the courses available in the public higher education sector.

E. Future prospects

This brief outline of higher education structures in Europe shows that the binary model based on the existence of a university and a non-university sector - or more diversified versions of the same - is the most widespread in Europe, with nevertheless some important exceptions: see figure 1. In 1991, an OECD report underlined that the non-university sector in Western Europe had largely succeeded in strengthening its objectives, methods and profile in higher education in the last 25 years (3).

What does the future hold? We have seen that at least two countries, Spain and Sweden, have evolved from the binary model towards an integrated, or comprehensive university model. In the United Kingdom, the imminent promotion of Polytechnics to full-scale university status is provoking public controversy on the possible disappearance of the division between the university and non-university sectors. However, it seems that the initiative amounts more to a shift in the division between the two sectors, as the 60 or so Colleges of Further Education will remain in the non-university sector.

Figure 1: HIGHER EDUCATION STRUCTURES IN EUROPE

Country	Binary system	Unitary system
EEC members	Belgium, Denmark, France, Greece, Ireland, The Netherlands, Portugal, Germany, United Kingdom	Italy, Spain
Non EEC members	Norway, Switzerland	Austria, Finland, Sweden
Central Europe/ Eastern Europe	Hungary, Croatia, Romania, Bulgaria	Poland, Czechoslovakia

Conversely, many countries in both West (Italy) and East (Czechoslovakia) are attempting to diversify their higher education structures in order to achieve their objectives more effectively. Overall, the dominant trend is towards more institutional diversity. In the university sector itself, the wish to create "European centres of excellence", evident in several Western European countries, suggests a new distinction between "advanced" universities with a high research capacity and linked to European networks, and the others, more geared to teaching. Beyond the university and non-university sectors, the less familiar private sector, is also developing in subjects which are in the forefront, such as Computer Science and Management. Generally speaking, Europe's higher education systems are evolving towards complex and diverse structures in an attempt to fulfil the aims which they have been assigned as well as the increasingly heterogeneous nature of their student clientèle.

II. ACCESS TO HIGHER EDUCATION

Policies governing access to higher education are an essential instrument for regulating student flows in education systems. Not only do European countries vary appreciably with regard to their admission and guidance procedures, but these procedures are applied to a pool of qualified school leavers which varies greatly in size and composition from one country to another. The result is a very contrasted panorama, the main elements of which are examined below:

A. Admission and guidance procedures

1. The situation in Western Europe

In the binary systems of Western Europe, procedures for admission to higher education establish a clear hierarchy between the university sector - more prestigious and therefore more selective - and the non-university sectors where entrance requirements are less stringent. This is the case of Germany and the United Kingdom, for example.

In **Germany**, the diploma which gives access to the two channels of higher education and more specifically to universities is the "Abitur", which requires 13 years of study. The Abitur, which schoolchildren take at the end of secondary school (Gymnasium), is a general diploma which in principle entitles them to enrol in any university or non-university higher education course. Entrance into the Fachhochschulen is possible for holders of the Fachhochschulreife, which is taken after 12 years of study; the last two years are carried out in the Fachoberschulen, which are full-time technical colleges. The Fachhochschulreife does not give access to universities, but the Abitur does give access to the Fachhochschulen. Lastly, there is a significant difference of a legal nature between the two diplomas, which is the result of the history of admission policies: while the Abitur gives students a statutory right to higher education, the Fachhochschulreife has no such statutory value.

Holders of either diploma can in principle choose the subject and the establishment where they wish to study, but the latter can impose restrictions on access when the number of candidates exceeds capacity. Candidates are then redirected through the central admissions office so that they can study the subject of their choice, even if it is not in the chosen establishment. They can also be placed on a waiting list so that demand is satisfied, albeit at a later stage. Since 1986-87, candidates for Medicine have been required to take an entrance examination and some universities require a personal interview.

In the **United Kingdom**, the secondary education qualification (A Levels) is necessary but not sufficient to gain access to higher education because each establishment is free to define its own admission criteria, although this freedom is to some extent restricted by academic prestige and inevitable financial constraints. Traditionally, universities are more selective than polytechnics and colleges of higher education and the academic standard of students admitted, measured in terms of A level grades, is higher than that of Polytechnic students.

Although access to higher education in the United Kingdom is very dependent on merit because it is very closely linked to academic performance at secondary school, there are two important exceptions which give the system more flexibility. The first concerns the tradition in most establishments of taking in a certain number of "mature students", ie candidates over 21 years of age: taking one year with another, these students represent 15% of new admissions. Many of them do not have the qualifications normally required (two or more A levels) and establishments are quite free to make exceptions for candidates with an unusual background such as experience in industry. The second exception primarily concerns Polytechnics and Colleges, which, far from being content to shine as second fiddles - the role to which the selection process condemned them, have attempted to adapt their intake to part-time students, a group neglected by universities.

In higher education systems where the university model is dominant, admission procedures can be extremely selective, as in Sweden, or on the contrary open to everyone as in Italy where every qualified school leaver has a right to university education. Other countries, like Spain and France, are somewhere between the two extremes.

In **Sweden**, the 1977 reform generalised the selection process for admission to higher education. It now applies to all curricula except "independent courses"; this enables adults to enter higher education. The number of places available in each of the five main sectors is set each year by parliament on proposal from the National Board of Universities and Colleges. The higher education system is therefore firmly in the hands of the authorities and strictly regulated.

Admission is based on a system of quotas defined according to criteria such as the average grade obtained in all secondary school subjects (in the absence of a general examination along the lines of the baccalauréat or the Abitur), work experience, which is considered an advantage, age (place quotas are reserved for adults over 25 years) and nationality (places are set aside for foreign students). Candidates are divided into seven groups and each group is allocated a number of places in higher education proportional to the number of candidates in the group. Candidates are selected **within each group** on the basis of their records - this is a crucial provision, the aim being to prevent candidates in one group from competing with those in another. The use of quotas acts as a definite curb on educational elitism by preventing those who have secured good grades in the longer secondary courses (three years), from taking all the places, at the expense in particular of those who have completed two-year secondary courses and candidates who have interrupted their studies in order to work.

In **Italy**, access to higher education and the freedom to choose a subject are given without exception to all students who have passed the end of secondary education examination (maturità). Neither the authorities nor the universities have the legal power to regulate intake to higher education or to institute selective admission procedures. Furthermore, there is no selection based on grades obtained in the maturità (a pass is sufficient), or on the subjects taught at secondary school. Admission to university is therefore exceptionally open to all in Italy, compared with the procedures in most other European countries.

Between the two extremes represented by Sweden and Italy, other countries such as Spain and France have adopted over recent years procedures which skilfully combine free access with selection.

In **Spain**, the COU (Curso de orientación universitaria) is a necessary and sufficient condition for university entrance, in accordance with the 1970 General Education Act. However, in 1975, entrance examinations were introduced for long duration higher education courses in the hope of encouraging students to enrol in short three-year courses. In 1977, a numerus clausus system was introduced for medical studies, and for teacher training in 1981. The 1983 University Reform Act served to generalise entrance examinations which had hitherto been regarded as exceptional. In 1988-89, 70% of faculties and schools, including faculties of Medicine and most technical schools, introduced entrance examinations of this kind, thereby encouraging "open" faculties and schools to do the same in order to protect themselves against students rejected by selective establishments. Two out of every three students are in selective faculties or schools, but Science and Arts faculties are not selective.

Grades obtained in the entrance examination (PAU: prueba de acceso a la Universidad) are considered together with those obtained in the COU and in the bachillerato. Students with the best grades have of course the greatest chance of being admitted, as long as the grades obtained are in the subjects required for the particular course. As a result, there is a progressively marked relation between the type of bachillerato taken (Science or Arts) and the type of university studies. In general, students with the best grades are enrolled in the long five-year courses in university faculties or higher technical colleges (Escuelas Técnicas Superiores).

In France, higher education admission procedures are unusual because, unlike other countries with a binary system, they combine free access to the university sector for holders of the baccalauréat and often extremely rigorous selection procedures in the non-university sector (the Instituts universitaires de Technologie and the Grandes Ecoles). Examinations, the type of baccalauréat taken and grades received, all contribute to make the non-university sector the competitive sector par excellence, attracting the most highly qualified, particularly in science subjects, at the expense of universities. The latter, which are not allowed in law to be selective, must open their doors to all applicants with the baccalauréat.

Over the years however, the universities have not found the situation unacceptable and have started to adopt selection procedures such as the requirement of a science baccalauréat with sufficient grades for science studies, the introduction of a first year examination or the assessment of school records in order to improve student guidance according to ability and their own capacity.

2. The situation in Central and Eastern Europe

Little is known in the West about higher education admission procedures in Central and Eastern European countries as yet. The scant information which is available shows, however, that access to higher education is strictly regulated everywhere by highly selective numerus clausus procedures. The secondary education diploma (maturità in Czechoslovakia, matura in Poland, etc) is always necessary but never sufficient. There is also an entrance examination, which is more or less selective depending on the university and the subject.

Admission procedures are far more restrictive than in the West and result in an abnormally low rate of entry to higher education. In Czechoslovakia, Poland and the former Soviet Union, only some 50% of qualified school leavers enter higher education, compared with 70-100% in the West! These methods are to a large extent inherited from educational planning as it was practised under the communist regime. Access to higher education was strictly subject to the perceived demand for a highly trained workforce and virtually absolute priority was given to technical subjects. Thus the admission ratio (number of students admitted compared with the number of applicants) in Engineering was and often still is 1:1, while it varies between 4:1 to 10:1 in subjects such as Medicine, Law and certain Social Sciences. The principal object was to ensure an adequate output of highly qualified experts to run the great public enterprises. The concept of free access in order to ensure equal opportunities and a democratic higher education system - such a rallying notion in the West - was fundamentally alien to the regime, which was more preoccupied with recruiting politically "sound" managers than with democratising education.

It is remarkable that these ultra-selective admission procedures are as well accepted today by students, their families and university staff themselves as they are. It is clear that access to higher education in Central and Eastern Europe is not considered to be the main outlet following secondary education, which is itself very democratic.

3. Summary and future prospects

This brief outline of admission and guidance procedures can be summed up in five main principles:

- In higher education systems with a binary structure, admission procedures are usually stricter in the university sector than in the non-university sector. Enrolment goes hand in hand with the (more or less mandatory) guidance of students towards one or the other sector. The situation is similar, although to a much smaller extent, for the guidance of students towards the long and short duration courses of comprehensive university systems.

- The qualification awarded at the end of secondary education remains necessary for admission to higher education, but is less and less of a guarantee that candidates will have a free choice of establishment or subject. In most Western European countries, this freedom of choice is subject to restrictions - often imposed by the higher education establishments themselves - in the form of additional requirements for more or less mandatory guidance purposes: entrance examinations, interviews, subjects studied, school records, etc. With the increasing level of autonomy given to higher education establishments, it is likely that they will gain more and more power to extend or even alter the legal rules laid down on the authorities governing access to higher education.

- When demand for places in a particular establishment or subject exceeds capacity, secondary school records, grades, subjects studied, options and final secondary examination results become increasingly important in admission and guidance processes. Even in countries where equality of access to higher education is formally guaranteed by law (all holders of the Abitur in Germany, the baccalauréat in France or the COU in Spain), candidates are placed in a hierarchy on the basis of school records and this is taken into account for admission and guidance as soon as the number of applicants exceeds capacity. **No country escapes the regulation of supply and demand through grades.** However, there is a well-established tradition in Northern Europe aimed at correcting the excesses of educational meritocracy by taking into account work experience (mainly in Sweden and to a lesser extent in the United Kingdom and Germany in the non-university sector). Such a tradition is virtually non-existent in the Latin countries of Europe (France, Spain and most of all Italy).

- The increasing importance given to grades in the admission and guidance process is the inevitable corollary of the institutional diversification process described in the previous section. Not only is higher education in Western Europe diversifying into sectors and sub-sectors, but differences - and explicit or implicit hierarchies based on academic prestige - are appearing between establishments. Clearly, there is no room in systems which are so diverse for admission procedures based solely on possession of the secondary education qualification.

- It is likely that the current highly selective admission procedures in Central and Eastern Europe will gradually become more "liberal" and more diversified, on the lines of those in Western Europe. But this change will take time, because of the presence of all sorts of constraints such as the lack of physical capacity of higher education in these countries and its under-diversification in some of them.

B. **The "pool" of qualified school leavers**

In each country, the admission procedures for higher education outlined above apply to the "pool" of qualified school leavers, which varies greatly in size and composition from one country to another. The larger it is, the greater the pressure at the point of entry to higher education. Its composition, in particular the percentage of those from technical and vocational secondary schools, also has an important bearing on the guidance of students in higher education.

Figure 2 below, which illustrates the situation in a number of countries, prompts the following comments:

- In some Western European countries, nearly half (45 %) of all pupils obtained a secondary education diploma in 1990 and therefore qualified to go on to one form or another of higher education. But this percentage is far from being universal. In some countries, only one in three or even one in four young people obtain this qualification, and in Central and Eastern Europe the percentage is even lower. Although very few statistics on pupil flows inside the education system are available, the proportion of those in the relevant age group obtaining the secondary education diploma is almost certainly less than 20% (one in five!).

- In absolute figures, the number of qualified school leavers varies greatly and reflects population distributions which are specific to each country. It is the largest in France and Italy (nearly 400,000), but low in the Federal Republic of Germany with less than 300,000 young people in spite of a higher population total - there was a decline between 1985 and 1990, whereas there was a slow increase in other countries (+ 10-15%). France is the only country where the number of qualified school leavers (holders of the baccalauréat) has risen rapidly over the last few years (+52%).

- The percentage of qualified school leavers from technical and vocational secondary courses in the total population of qualified secondary school leavers varies from 25% to 50%, depending on the country. It is very high in countries where 50% of young people obtain the secondary education qualification, which shows that technical and vocational courses play a very important role in the democratisation of secondary education. Where access to higher education is concerned, it is clear that in future, admission and guidance procedures will have to take account more and more of the existence of an important number of qualified technical secondary school leavers among the applicants.

Table 2 : SECONDARY SCHOOL DIPLOMA HOLDERS IN EUROPE

(1990)

	% of the relevant age group	Number of secondary school diploma holders	Past change over five years (origin year = 100)	% with tec./vocational qualifications within total number of secondary school diploma holders
FRG	45	275,000	92	33
France	45	384,000	152	35
Italy	45	385,000	115	47
Sweden	45	40,000	109	44
UK	33	268,000	110	23
Spain (1987)	27	167,000	108	n.a.
CSFR Poland Bulgaria	< 20	n.a.	n.a	n.a.

Source : **Official Statistics**
FRG : ***Abitur*** **and** ***Fachhochschulreife.***
France : ***Baccalauréat.***
Italy : ***Maturità*** **in 13 years.**
Sweden : **12 years of study minimum.**
United Kingdom: Two A levels and BTEC, National Certificates and Diplomas.
Spain : ***COU (Curso de Orientación Universitaria).***

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It would be interesting to extend this study in a systematic way to all Council of Europe member countries, in order to obtain an exhaustive picture of the population of qualified secondary school leavers in Europe, because it represents an essential factor to be taken into account in policies of access to higher education. Its size, composition and recent evolution are important parameters to be borne in mind when looking at the future prospects of higher education. The research does not present any technical difficulties in Western Europe. The absence of statistics on student flows in certain Central and Eastern European countries may mean that require a certain degree of approximation, but on the whole it should be possible to carry out a comparative analysis of the situation throughout the continent with a perfectly satisfactory degree of exactitude.

C. Student flow management

The rate of admission from secondary to higher education gives an idea of the degree of "selectivity" operating at the point of entry to higher education and its different sectors. It can thus be used as an instrument for the management and channelling of student flows. The examples below illustrate the diversity of the situation in Europe.

In **Germany** the secondary school - higher education transition rate fell from 90% or so in the 70s to 73% in 1983. The rate is lower for girls and for holders of the technical secondary diploma than for boys and holders of the Abitur. Admission procedures are therefore on the selective side, in spite of the right of access to higher education conferred by the Abitur. They also contribute to the guidance of students towards the Fachhochschulen where there are many holders of the Abitur who could have expected a place in a university. Where future developments are concerned, the German Conference of Ministries of Education of the Länder publishes estimates of the number of new entrants into higher education up to the year 2010, based on transition rates between 70% and 80%.

Figure 3: TRANSITION RATE FROM SECONDARY SCHOOL TO HIGHER EDUCATION IN THE FEDERAL REPUBLIC OF GERMANY
(4 years after obtaining the secondary education diploma)

1983

	boys	girls
Abitur Holders	80%	62%
Fachhochschulreife holders (technical secondary education)	76%	43%

Source: Durrer, F. and Minks, K.-H "Übergänge in Studium, Berufsausbildung und Berufstätigkeit", HIS Kurzinformationen, 1909, A3.

In the **United Kingdom**, the admission rate from secondary to higher education is approximately 85%, therefore higher than in Germany, despite the fact that having two A levels does not "entitle" students to admission into university. Admission procedures in the United Kingdom are therefore not very selective in practice, but this is only because the pool of school leavers who are qualified to enter higher education (at least two A levels) is smaller than in Germany. In the United Kingdom, selection takes place earlier, at the end of the 11 years of comprehensive school, thus reducing the number of students who obtain two A levels.

While admission procedures in the United Kingdom overall are not very selective, they are very effective in channelling students between the university and non-university sectors. In the 80s, numbers of new entrants to universities rose much more slowly than the numbers of admissions into the non-university sector, so much so that it is fair to refer to a certain division of labour between the two, with universities becoming increasingly selective, while the non-university sector serves to take in students rejected by universities. universities.

With a rate of transition from secondary to higher education of 35%, five years after obtaining the secondary education diploma, admission procedures in Sweden are very selective in practice. Approximately 80% of the age group complete secondary education, only a small proportion of which is considered sufficiently qualified to have some chance of going to university. In the 80s, the number of new entrants to higher education only rose slightly, confirming the existence of a strict selection process. The guidance of new entrants between the short and long duration courses (approximately 50% for each) is very efficient.

In **Spain**, measures introduced to make access to higher education more selective seem so far to have had very little effect on global transition rates, which are very high (100% or even more). This reflects the marked tendency of Spanish students to go on to higher education as well as the low selectivity of admission procedures - largely due to the fact that students not admitted into a particular university or selective subject can seek admission to another establishment with open access. It is generally agreed that the changes in admission procedures have not yet managed to modify the traditional liking of Spanish students for long university studies in preference to courses of short duration.

In **France**, where the very rapid growth in the number of qualified school leavers (holders of the baccalauréat exerts a considerable pressure on admission procedures, the rate of admission from secondary to higher education varies from 90 to 100%, depending on the type of secondary education followed. Overall, the system is therefore not selective and encourages the guidance of students towards the non-university sector, which now takes in one half of new admissions as opposed to approximately one-third in 1980.

These examples illustrate the diversity of policies of access to higher education in Europe. It is tempting by way of conclusion to try to generalise about Europe as a whole, by classifying the different countries in terms of their degree of selectivity regarding access to higher education. Southern Europe (Italy, Spain, France) is characterised by extremely liberal policies of access to higher education, although in France a strict selection process operating in part of the non-university sector leads to obligatory student guidance practices. In Northern Europe - and particularly in Sweden - access policies are slightly more restrictive, and student guidance is distinctly more mandatory. Freedom of choice only really exists for students with high grades (the great majority, nevertheless). In Central and Eastern Europe, lastly, access to higher education is very restrictive and the majority of students have little freedom of choice.

On examining the development of the pool of qualified school leavers and rates of transition to higher education, different patterns of access to higher education emerge (see Figure 4). In France and Italy, the pressure in the first years of higher education is very high, sometimes leading to overcrowding, because high admission rates coincide with very large pools of qualified school leavers. The pressure is not so great in Sweden, despite considerable development in the secondary sector, because transition rates are more strictly controlled. The situation is the same in Spain for the opposite reasons. In Central and Eastern Europe, with small numbers of qualified school leavers and very low levels of transition to higher education, the first years of higher education are very protected - and to some extent isolated - from developments occurring in the rest of the education system.

Table 4 : EUROPEAN PATTERNS OF ACCESS TO HIGHER EDUCATION

Around 1990

Pool of qualified secondary school leavers (% of age group) \ Transfer rates		High (90-100%)	Medium (80-90%)	Low (less than 70%)
Big	(around 50%)	France, Italy	-	Sweden
Medium	(35-45%)	-	FRG	-
Small	(less than 33%)	Spain	UK	Poland, Hungary, CSFR

Source : see Text.

III. ENROLMENT IN HIGHER EDUCATION

A. Recent trends in Western Europe

The statistics required to assess the level of enrolment in higher education are shown in Figure 5 for a few countries. The following points must be made:

In the **Federal Republic of Germany**, the total number of students was approaching 1.6 million in 1991, three quarters in universities and one quarter in Fachhochschulen. Women are better represented in universities (41% of the total) than in the Fachhochschulen (29%). These percentages are abnormally low, by European standards, and are partly due to the importance given to Engineering -- a traditionally masculine subject - in the Fachhochschulen. The total number of students rose very rapidly during the last decade (+52%) but the increase was even greater in the Fachhochschulen (86%), which confirms the preferences of students for this sector. The number of new university entrants is relatively low (fewer than 200,000) compared with the total. The ratio is 1:6, reflecting the very long duration of studies. In other words, the total student "stock" is inflated by the presence of a large number of "old" students, while the flow of newcomers is limited. While the German university system can be considered to be very developed, it is not very effective in helping students obtain a diploma.

In the **United Kingdom**, the total number of students is estimated at 1.07 million, but the number of full-time students is much lower: 670,000 or 63% of the total. The 400,000 part-time students include students enrolled in evening classes, day release and Open University students.

Undoubtedly, there are far fewer students in the United Kingdom than in the Federal Republic of Germany. However, the overall figures must be interpreted with caution, because courses in the United Kingdom are normally short: 3 years for a bachelor's degree. Conversely, one could say that the system is not well developed quantitavely, but is more efficient because students graduate faster. Students are distributed almost evenly between universities (45%) and Polytechnics or Colleges (55%). Women, who represent 46% of the total, are generally better represented than in the Federal Republic of Germany, and this is particularly true of the non-university sector, where their number equals that of men (49%). This reflects the wide range of subjects offered by the sector, including so-called "feminine" subjects such as teacher training, social work and paramedical studies. The rise in the total number of students during the last decade has been moderate (+37%) but much faster in Polytechnics and Colleges (+55%) than in universities(+20%). This growth pattern reflects the increasing selectivity of university procedures of admission to universities, which have controlled their own development better than have those on the continent. While universities have become more "elitist" in one sense, the non-university sector has opened its doors to qualified school leavers. The flow of new students is small (168,000), but this figure only takes into account full-time students. The flow/stock ratio is 1:4, which shows that the higher education system is effective.

In **Sweden**, the total number of students slightly exceeds 200,000, 55% of whom are enrolled in short courses. Women are almost equally represented and are heavily over-represented in short courses, which include teacher training, social work and paramedical studies. In strong contrast with other Western European countries, growth in student admissions has been minimal in the last ten years (+8%). The ratio of new admissions (50,000) to the total number of students is 1:4, indicating the importance of short courses. One can conclude that the Swedish system is characterised by very slow but balanced growth in higher education, due to highly selective admission procedures.

In **Spain**, the total number of students (over 1 million), is the same as that in the United Kingdom. The faculties (facultades) embracing two-thirds of all students, retain their traditional importance, while technical and engineering schools offering 3- and 5-year courses account for only 15% of the total. Overall, women are equally represented, but they are heavily under-represented in technical schools. In the last ten years, the growth of higher education has been extremely fast (+67%), particularly in 3-year courses. Each year, new admissions have exceeded the 200,000 mark. This is a very high figure, compared with the Federal Republic of Germany or the United Kingdom, and the low selectivity of admission procedures, in spite of the attempts to tighten up selection described above.

In **France**, the total number of students is the same as in the Federal Republic of Germany (nearly 1.6 million), with a similar distribution between the university sector (70%) and the non-university sector (30%). The latter is divided into sub-sectors as explained in section I. Men and women are equally represented in universities (more than 50% women) but not in Institutes of Technology (IUT - Instituts universitaires de technologie) or in preparatory courses for the Grandes Ecoles. Student numbers rose very rapidly in the 80s (+59%) but still more rapidly in the advanced technician sector (Section de techniciens supérieurs - STS), with an increase of 171%. The yearly student flow is unusually high, particularly in the non-university sector, where it is twice as high as in Germany, as a result of the rapid growth in the number of students with the baccalauréat and the high level of transition to higher education. The flow/stock ratio is approximately 1:2 in the non-university sector, reflecting the short duration of studies (2 years) as well as this sector's high level of success in the award of diplomas.

Enrolment rates for higher education are shown in the last column of Figure 5. Three of the five countries considered here, (France, the Federal Republic of Germany and Sweden) have enrolment rates approaching 50%. In these countries, one in two students go on to higher education. It will be noted that in the Federal Republic of Germany, the 45% enrolment rate is achieved with much smaller numbers of new entrants. This highlights the recent but definite decline in the size of the age-group at the stage of entry into higher education. With a proportion of one in three students going on to higher education, Spain's performance is excellent here, thanks to recent developments. In the United Kingdom, only one in five students goes into full-time higher education. However, this figure under-estimates to some extent the real situation as there is a large number of part-time students. But it also reflects the low numbers of school leavers qualified to enter higher education (at least two A levels).

Table 5 : TRENDS IN STUDENT ENROLMENTS IN WESTERN EUROPE

	Enrolments		Proportion of women (%)	Rate of increase over 10 years (origin year= 100)	News Entrants		
	(Thousands)	(%)			(Thousands)	(%)	(As % of the age group)
FRG (1990-91)							
- Universities	1190	76	41	144	195	71	
- *Fachhochschulen*	373	24	29	185	80	29	
Total	1563	100	38	152	275	100	45
Great Britain (1989-90)							
- Universities	472	45	43	120	80	48	
- Polytechnics/Colleges	595	55	49	155	88	52	
Total	1067	100	46	137	168[1]	100	20
Sweden (1990-91)							
- Long cycles	98	45	44	129	34	68	
- Short cycles	118	55	65	97	16	32	
Total	216	100	56	108	50	100	40
Spain (1989-90)							
- *Escuelas Téc. Superiores*	69	6	16	153	12	5	
- *Facultades*	689	65	52	166	132	60	
- *Escuelas Universitarias*	216	20	63	170	52	24	
- *Escuelas un.Técnicas*	94	9	12	181	23	11	
Total	1068	100	49	167	219 [2]	100	33
France (1990-91)							
- *Universités: premiers cycles*	541	34	59	160	228	52	
- *Classes préparatoires*	68	4	36	171	38	9	
- *IUT*	74	5	37	139	34	8	
- *STS*	199	13	50	271	103	24	
- *Social paramédical*	80	5	82	81	32	7	
Total "*premiers cycles*"	962	61	56	159	435	100	50
- *Universités (2° & 3° cycles)*	556	35	52	142	-	-	
- *Grandes Ecoles*	58	4	20	156	-	-	
Total	1576	100	53	153	-	-	

Sources: Official Statistics.

1) Full time students only.

2) New entrants for Spain refer to 1987/88.

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B. The situation in Central and Eastern Europe

Statistical data on the enrolment of students in higher education in Central and Eastern Europe is still incomplete (see Figure 6). However, rapid improvements are expected here, now that information is circulating even more freely due to expanding cooperation, among other things (4). Available statistics nevertheless make it possible to identify a number of distinctive features which contrast sharply with the situation in Western Europe:

- Student numbers are generally low, as are enrolment rates, which are difficult to calculate in the absence of statistics on student flows: - lower than 20% in all cases and in some cases lower than 15%.

- Enrolment rates are apparently higher for women than for men, especially in the non-university sector (Bulgaria). On this score, it seems that Central and Eastern European countries have no reason to envy the West.

- In general, the development of higher education in the last ten years has been non-existent or even slightly negative. This reflects a low growth rate in the pool of qualified school leavers and restrictive practices for admission to higher education. On average, out of every two or three candidates, only one is actually admitted.

- In the absence of data on student flows, it is difficult to gauge the internal efficiency of higher education systems. The official duration of studies - five years in universities and two to three years in the non-university sector - is certainly very similar to that in Western Europe.

Table 6 : TRENDS IN STUDENT ENROLMENTS IN CENTRAL/EASTERN EUROPE

	Enrolments		Proportion of women	Rate of increasece over 10 years	Number of students as % of the age group
	(thousands)	(%)	(%)	(origin year=100)	
Bulgaria (1991-92)					
- Universities	151	73	51	n.a.	
- Non-university sector	55	27	71	n.a.	
Total	**206**	**100**	**56**	**n.a.**	**20**
Hungary (1989-90)					
- Universities	42	55	n.a.	n.a.	
- Non-university sector	35	45	n.a.	n.a.	
Total	**77[1)]**	**100**	**n.a.**	**n.a.**	**10**
Poland (1990-91)					
- Universities	310	100	n.a.	99	
- Non-university sector	-	-	n.a.	-	
Total	**310[2)]**	**100**	**n.a.**	**99**	**12**
Russia (1989-90)					
- Universities	n.a.	n.a.	n.a	n.a.	
- Non-university sector	n.a.	n.a.	n.a.	n.a.	
Total	**1215**	**100**	**n.a.**	**n.a.**	**n.a.**
CSFR (1990-91)					
- Universities	199	100	n.a.	93	
- Non-university sector	-	-	n.a.	-	
Total	**199**	**100**	**n.a.**	**93**	**16**

1) 104 000, if part-time students are included.
2) 400 000, if evening students are included.

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IV. THE EUROPEAN DIMENSION OF HIGHER EDUCATION

The development of international student mobility is one way of promoting the European dimension of higher education. Since 1987, the European Commission in Brussels has set up a number of programmes **(ERASMUS, COMETT, LINGUA)** with the aim of encouraging the mobility of students inside the twelve Member States during the course of their studies. The extension of ERASMUS to the EFTA countries is expected to begin this year. Furthermore, the TEMPUS programme, started in 1990, constitutes a first attempt to establish co-operation between Western and Central and Eastern Europe, although student mobility is not the main objective of the programme. Mobility in higher education also continues to be encouraged through ambitious national programmes and agencies or even through exchange programmes developed and administered by higher education establishments themselves. Although it is sometimes considerable, mobility in higher education is not always properly monitored.

A. Student mobility inside the EEC

It is difficult to make a precise quantitative estimate of student mobility in the EEC because of the diversity of programmes and statistical sources and the failure of official statistics to record student mobility in full. According to a recent report commissioned by the TASK FORCE in Brussels (5), there were in 1990 approximately 90 - 92,000 "mobile" EEC students, ie studying in another Member State. The three largest "exporters" of students are Greece (24% of the total), Germany (17%) and France (13%). The main "importers" are Germany (24%), France (13%) and the United Kingdom (19%). However, these figures can be misleading, as the number of students "exported" or "imported" by the larger EEC countries remains very low compared with the number of nationals: between 1 and 2% of the total. The only exceptions are Luxembourg, Greece, and Portugal, which are traditional "exporters" of students for built-in reasons.

It is extremely likely that mobility in higher education in EEC countries has risen considerably over the last two years, which corresponds to the increasing impact of the ERASMUS programme and the start of the LINGUA programme. In the absence of official statistics, it would be risky to quote a figure, but it is may will be that in 1992 close on 200,000 students could be considered "mobile", or 3% of the total EEC student population.

The obstacles to student mobility between the countries of the EEC are numerous and well-known. Apart from obstacles of a financial (insufficient grants), administrative (lack of information) or cultural nature (knowledge of foreign languages) which are outside the scope of this report, there remain two obstacles which are linked to the structure and organisation of national higher education systems:

- the first concerns access to higher education for foreign students,
- the second relates to the lack of recognition of studies carried out abroad.

The countries of the EEC are currently introducing two methods of dealing with the problem of access to higher education for foreign students (6): either the foreign student is treated as a national and must satisfy the conditions of the host country, or the conditions of access to higher education in the country of origin are accepted by the host country, once they have been satisfied. The first method, based on the principle of non-discrimination between nationals and foreigners, is attractive because it is so simple. In practice, however, it can penalise foreign students who are handicapped by the language and by a preparation for higher education which is very different from that of nationals. These disadvantages could be solved by each country reserving a certain quota of places for foreign students. Given the diversity of policies of access to higher education, the second method is in practice beset with difficulties which would be difficult to resolve by straightforward regulatory measures at national level.

The non-recognition of periods of study abroad also helps to discourage the mobility of students, who are liable to see it as a waste of time. For this reason, one of the basic principles underlying the ERASMUS programme is the recognition of periods of study abroad by the university of origin, so that they do not result in a prolongation of the total period of study. The question also arises for the university of destination which takes in students during the course of their studies: a student who has completed three years of higher education in country A and wishes to continues studying in country B will logically wish to enrol in the fourth year. It is sometimes difficult to consider the years of higher education carried out in the country of origin as necessarily equivalent to those completed in the host country, in so far as the curricula, organisation of studies and level of requirements vary greatly from one country to another and also, in the same country, from one establishment to another. In practice, the abilities of foreign students tend to be assessed by **higher education establishments themselves**, which will also decide whether to admit them or not. In an attempt to resolve these difficulties, the ECTS (European Community Course Credit Transfer System) has been created within the ERASMUS programme. It allows students who participate in the system to have the periods of study they have successfully completed in any participating establishment recognised in full.

B. Beyond the EEC

In the absence of Community programmes, the mobility of EEC students beyond the borders of the "twelve" and the entry of non-EEC students into the twelve member countries is regulated by bilateral agreements. These migratory movements can be very considerable, particularly between countries belonging to homogenous linguistic and cultural zones. This is the case with exchanges between Germany, Austria and Switzerland, or between Denmark and the other Scandinavian countries. This mobility does not seem to have been affected in any way by the implementation of exchange programmes inside the EEC.

Mobility in higher education between the two halves of Europe (Western and Central/Eastern) has always been very insignificant and imbalanced to the detriment of the latter, for reasons which have been well documented and analysed in depth in a recent report (7): lack of finance, the paucity of information, language difficulties, lack of student and teacher training, etc. In 1988-89, fewer than 7000 Western European students were studying in Central and Eastern Europe was lower than 7,000, and 75% of that number were Greek students enrolled in countries bordering on Greece (Bulgaria and Yugoslavia). In the other direction, student flows were somewhat greater but not really substantial since there were no more than 11,000 Central and Eastern European students attending higher education establishments in Western Europe.

The new situation created by the political events of 1989-90 will no doubt alter the nature of the problem and a massive increase in student mobility from Central and Eastern European countries and the CIS in the direction of Western Europe can be expected. Multilateral programmes, such as TEMPUS, are already contributing to this trend in certain disciplines. Bilateral aid, which is perhaps easier to mobilise, is also playing a part, as shown by the rapidly increasing number of grants offered by the main exchange organisations in Western Europe. In the other direction, it will probably be more difficult to change the situation substantially. At present, it is the teaching profession which is contributing - rather than the students - to the numbers of university exchanges in the direction of Central and Eastern Europe.

V. FUTURE PROSPECTS

It is difficult to outline precisely the future development of enrolment in higher education in Europe. We shall limit ourselves here to indicating the present stage of discussions on this subject.

A. Calls for growth from international organisations

It is a fact that international organisations concerned in one capacity or another with the problems of higher education in Europe have all come out in favour of expansion in the number of students and higher enrolment rates:

- The recent **"Memorandum on Higher Education in the European Community"** prepared by the Brussels Commission is particularly clear on this point. Participation in and access to higher education are seen as one of the five critical areas calling for action on the part of higher education establishments, Member States and the Commission. According to the Memorandum, "An increased level of participation in higher education can be brought about by enrolling a greater proportion of the relevant age group but also by catering for more mature students through continuing and recurrent education. Common targets for participation within the Community should be considered along with support to the regions in attaining such targets." (p. III).

Further on (p. 16), the Memorandum specifies the principal elements of the growth policy:

. "Actions at the secondary level of education to increase the stock of qualified school leavers and to influence demand in the direction of perceived needs for higher level skills...

. Actions at the point of entry to higher education. These actions are generally directed at facilitating the process of entry and over a wider spectrum of the population. They can take the form of greater flexibility of academic entry conditions, acceptance of vocational qualifications gained at secondary level or during vocational training, provision of "access" or preparatory courses, giving credit for "maturity",. work experience and training achieved in the workplace."

- The **OECD**, although less specific than the EEC on the subject of the growth of higher education in Western Europe, has recently published a report on higher education in Czechoslovakia, as part of its survey of the educational policies of member countries. The second of the six recommendations in the report, entitled "Towards an enlarged and diversified system of higher education" is that the enrolment rate, currently standing at 15%, should be raised to between 25% and 30% by the year 2000 by developing the non-university sector of higher education in particular. A similar report on Hungary at present being prepared can be expected to contain recommendations along the same lines.

- In its technical reports, the **World Bank** has also referred to the low level of participation in higher education in Hungary and Poland. Investment programmes currently under way in Hungary and being drawn up in Poland are looking ahead to growth and the restructuring of secondary education which should produce an increase in enrolment in higher education. The World Bank is quick to point out that, although the number of students is low, the number of lecturers in higher education is high. The training capacity is therefore very favourable - much more so than in Western Europe - and leaves considerable room for manoeuvre in increasing the number of students without having to create new teaching posts, or to downgrade the quality of teaching.

- In the context of its consultations and seminars on the future of education in Central and Eastern Europe, **UNESCO** has until now concentrated mainly on primary and secondary education, rather than higher education (8). It is principally concerned with the structure, curricula and administration of education systems rather than with higher enrolment rates.

B. The reluctance of national authorities and higher education establishments

Calls for the development of higher education by international organisations are sometimes received with a degree of circumspection by national authorities and higher education establishments. This is due, it seems, to preoccupations of a general nature as well as to factors which are specific to each country.

The first of these preoccupations has to do with **finance**. In many Western European countries, the 80s have left a memory of budgetary restrictions and those with responsibility for higher education at national level and for the institutions themselves are concerned at the prospect of larger members coming into higher education without an assurance of an increase in their budgets. As a result, they tend not to be won over by the ideology of growth laid before them. The situation from this point of view is particularly serious in Central and Eastern Europe, where low budgetary levels make all experimental programmes and reforms very difficult and where teachers lack motivation as a result of outrageously low salaries. In such conditions, higher rates of participation in higher education are far from being the primary concern of decision-makers.

Preoccupations of an **institutional and administrative** nature, linked to the management of higher education establishments, are present in all countries and tend to take precedence over any increase in capacity. Efforts at decentralisation, the quest for autonomy and new methods of finance, the improvement of management procedures, combatting examination failures, and the forming of partnerships seem to take up more of rectors' and presidents' time and energy than does the development of higher education institutions. In Eastern Europe, the first priority has been to promote the legal independence of universities, an objective which is understandable after decades of excessive centralisation, but which does not necessarily facilitate the adoption by higher education establishments of a vigorous growth policy (9).

In addition to the problems above which are common to all countries, there are factors specific to the situation of each country which make them less receptive to the expansion "message" from international organisations. In the Federal Republic of Germany, for example, the predictions of the Conference of Ministers of Education (Länder), face shadowing a slight decline in the number of students between 1990 and the year 2000 are somewhat at odds with the views expressed in the Commission's Memorandum. Of course, these predictions will perhaps be counterbalanced by the greater tendency for qualified school leavers (Abitur holders) - whose number has been falling in the last few years - to enter higher education, as has already been the case in the past. However, a policy which aims to raise enrolment rates in higher education while reducing the actual duration of studies is liable to fuel the sometimes heated controversy in university circles between advocates of this solution (German student take an average of seven years to obtain their diploma) and supporters of the academic tradition which allows students to progress at their own pace, combining learning with research. The message is more likely to be heard by the Fachhochschulen which have already played an important role in the past in increasing enrolment in higher education.

In the **United Kingdom**, the nation-wide higher education picture is one of rapid growth. The main bottleneck is the small number of school leavers who are qualified to go on to higher education (two or more A levels). The enrolment rate in 6th form colleges, which prepare students for A levels, has been tending to move upwards over the last few years; this will eventually increase the size of the pool of qualified school leavers. In the immediate future, higher education in the United Kingdom seems to be in a better position to go along with another proposal in the Memorandum of the Commission, urging the adoption of more flexibility in admission procedures, taking into account work experience and facilitating access to higher education for adults. Polytechnics traditionally tend to be sympathetic to students with "non-standard" qualifications and to part-time students.

In **Sweden**, the last decade has been one of stability, even stagnation, in higher education enrolment. A recent report presented to the OECD by the Swedish authorities (10) stresses that "the capacity of Swedish higher education has remained unchanged for 20 years", a situation which is quite exceptional in Europe. Discussions are currently taking place with the aim of making higher education more accessible and thereby making new progress regarding enrolment. However, the modesty of the objectives put forward (+20% new entrants) indicates that the Swedish authorities are not really inclined to go along with the calls for growth from the international community.

In **Spain**, university education spread in the 80s to the masses, a process which is likely to continue in the future. Initiatives designed to make admission into some universities and disciplines more selective have not yet had a very significant effect on the admission and guidance of students in the various sectors of higher education. Where Spain is concerned, calls for development are somewhat superfluous, since the authorities and university administrators are on the contrary trying to control and channel a somewhat unruly spontaneous increase in new admissions.

In **France**, the objective of 2 million students in higher education by the year 2000 (compared with 1.6 million today) is supported by the authorities, although university administrators make no secret of their concern at the prospect of a continuation of the rapid development seen in the 80s. The objectives of French higher education policy are on the whole in line with the proposals of the Commission's Memorandum, having even preceded them by a number of years. A higher education enrolment rate of 60% of the age-group by the year 2000 is certainly possible if the objectives are carried out as proposed. When it comes to the guidance of students entering higher education, the French authorities intend to pursue past policies and significantly increase the number of new entrants into the non-university sector. By the year 2000 universities would only take in one in two of all candidates, compared with two-thirds in 1980.

In Central and Eastern Europe, problems of an economic and institutional nature prevent the adoption of explicit growth policies, despite the existence in these countries of a certain non-utilised growth potential in the form of large numbers of teaching staff already in place. It does seem that stimulation of growth in higher education will only be achieved with a significant amount of Western technical aid (secondment of teachers of subjects not well developed in the East), and an increase in the proportion of the national budgets set aside for higher education. In this respect, Central and Eastern European countries not only need to be encouraged to achieve growth - they also need the human and financial resources that will make it possible.

NOTES

(1) "Memorandum on Higher Education in the European Community", Task Force on Human Resources, Education, Training and Youth, EEC, 1991.

(2) L'enseignement supérieur en Europe, Jean-Pierre **JALLADE**, La Documentation française, Paris, May 1991.

(3) Alternatives to Universities, OECD, Paris, 1991.

(4) Conference on Education and the Economy in Central and Eastern Europe, **OECD**/GD (92) 108 to 120, Paris 29 June - 1 July 1992.

(5) "Student mobility within higher education in the European Community" Institute for Policy Research, University of Leiden, November 1991.

(6) "Access to higher education within the European Community", Institute for Policy Research, University of Leiden, November 1991.

(7) "Recent trends in Eastern European Education", Wolfgang **MITTER**, Manfred **WEISS**, Ulrich **SCHAEFER**, editors, in Proceedings of the UNESCO workshop held at the German Institute for International Research, Frankfurt-am-Main, 5-7 June 1991.

(8) "Academic Exchange in Europe. Towards a New Area of Cooperation", Denis **KALLEN**, in The Open Door. Pan-European Academic Co-operation, UNESCO-CEPES, Bucarest, 1991.

(9) "Concept for higher education development in Hungary", Co-ordination Office for Higher Education, Budapest, 1991.

(10) "Higher Education and Employment, the Changing Relationship", National Board of Universities and Colleges, Stockholm, 1991.